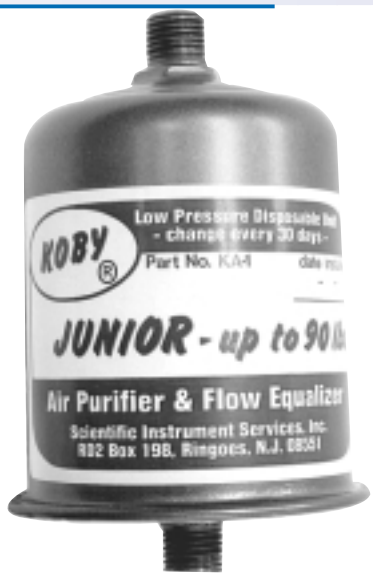
Removes Contaminants From Vacuum Pump Exhausts



KA-1 Koby Air Purifier with 1/4" NPT

Features

- High Efficiency Filtration
- Low Operating Cost
- Maintenance Free
- Completely Disposable
- Pressure Safe
- Easily Installed and Replaced
- Equalizes Air Flow
- Helps Maintain Safe Working Environment
- Two Sizes - Koby Standard or Larger Capacity Koby Junior King

Function

Koby Air Purifiers are installed on exhaust ports of roughing pumps to adsorb remaining compressed air contaminants such as oil aerosols, oil vapors, certain other hydrocarbon vapors, and trace moisture. They also trap all foreign solid particles such as dirt, dust, rust, and pipe scale down to 0.5 microns in size. In addition, Koby Air Purifiers can be used for efficient adsorption and removal of organic vapors and aerosols, noxious odors, certain foreign gases and bacteria, and are effective in removing certain inorganic vapors and aerosols from compressed air and vacuum air.

These carbon filters can be used in conjunction with oil mist eliminators. The oil mist eliminator traps and returns the oil to the vacuum pump while the Koby Air Purifier removes any remaining contamination which might otherwise be emitted into the laboratory air.

▶ *Tech Tip* Standard Pump Filter Kits consisting of a Koby Charcoal filter in conjunction with an Oil Mist Eliminator are available from SIS for most Vacuum Pumps. See pages F28 - F29

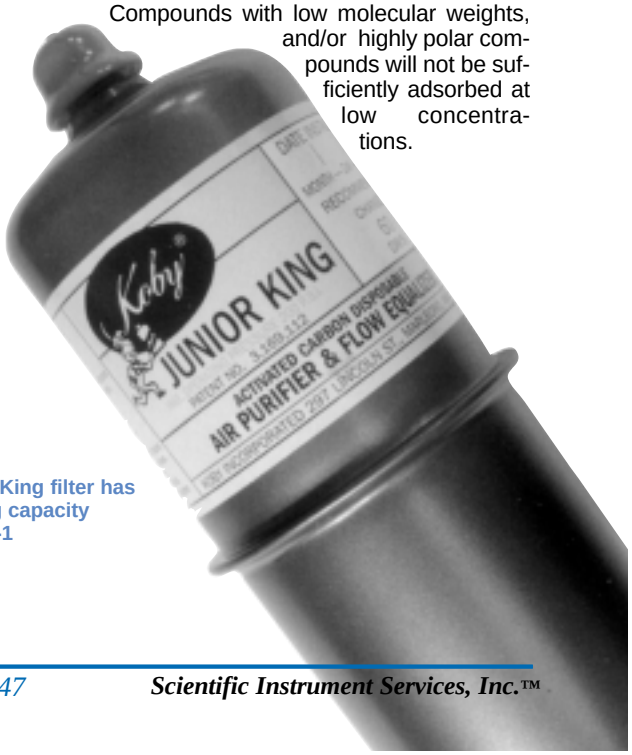
Range of Possible Adsorption Capacities

Contaminant	Initial Removal Efficiency	% of Carbon Weight Adsorbed
Oil Vapor	99.9%	50-60%
Organic Solvents	99.9%	15-45%
Oil Aerosols	99.9%	50-60%
Moisture	99.9%	30-50%
Hydrocarbon Vapors	99.9%	50-60%
Oil Mist	99.9%	50-60%
Dirt	to 0.5 microns	N/A
Bacteria	to 0.5 microns	N/A

Adsorption Capacity

The carbon used in the manufacture of Koby Air Purifiers has a huge internal and external surface area with an affinity for adsorbing organic contaminant's. Each gram of carbon has a surface area of approximately 1500 sq. meters, making Koby Air Purifiers particularly efficient for most air purification and gas phase applications.

Actual adsorption capacity can be as high as 80% of carbon weight depending on the specific compound being removed. Generally (but not always), adsorption capacity of activated carbon increases with molecular weight, boiling point, and concentration of contaminants. Compounds with low molecular weights, and/or highly polar compounds will not be sufficiently adsorbed at low concentrations.



The KA-2 Koby Junior King filter has twice the trapping capacity of the KA-1